## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

Source:

Date Processed by STIC:

ENTERED



IFWP

RAW SEQUENCE LISTING DATE: 09/29/2006
PATENT APPLICATION: US/10/593,545 TIME: 11:13:23

Input Set : A:\PTO.RJ.txt

Output Set: N:\CRF4\09292006\J593545.raw

3 <110> APPLICANT: Rockefeller University 5 <120> TITLE OF INVENTION: LYTIC ENZYMES AND SPORE SURFACE ANTIGEN FOR DETECTION AND TREATMENT OF BACILLUS ANTHRACIS BACTERIA AND SPORES 8 <130> FILE REFERENCE: 12157/17 C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/593,545 C--> 11 <141> CURRENT FILING DATE: 2006-09-20 13 <150> PRIOR APPLICATION NUMBER: 60/555,916 14 <151> PRIOR FILING DATE: 2004-03-24 16 <160> NUMBER OF SEQ ID NOS: 109 18 <170> SOFTWARE: PatentIn version 3.1 20 <210> SEQ ID NO: 1 21 <211> LENGTH: 37373 22 <212> TYPE: DNA 23 <213> ORGANISM: Bacillus anthracis 25 <400> SEQUENCE: 1 26 ctcaacttcg cagaaaatc cgtttttgca tatttttta agggggtgta atcatggctg 60 28 gaagaaataa acaaccactc tctgttatac agggaaaagg tagatcaaat cacattacaa 120 30 aaagtgagaa aaacagacga gaaaaacaag aagaagcatt gcgggggcat actgataaaa 32 ttgaagctcc ttcttatttg actgcagcac aaaaaaagga attcgatact ttagctgctg 240 34 aattagtcag attgaaaatt ttcagtaact tagatgttga cagtttagca aggtacgttg 300 360 36 attctaaaga ccaatatata aaaatggttc gtctgctaag aaaaacaaaa ccttcagatg 420 38 actttaaatt gtattctcaa atgcaaagaa gtaaaaatct tttattcaat gaatgccgtt 480 40 cttcagctag tgatttaggt ttgaccatta catcccgctt aaaattagtt attccagaag 540 42 tagatacttc acaacaaaag caaagtgaag cgcaaaagcg ttttggtgat cgtatatgaa 44 ctggataatg gaacgggttt ttgcatattg cgaggacatt ttaaacggca agataaatag 600 660 46 ttgtaaaaaa catcgttggg ccattgaacg atttataagg gattatgagg agtgtcaaag 720 48 tgaagacagt cctttttatt ttgatggaga gatagcggag gatttttact ggtttgcaaa 780 50 ggaatttaag cacgttgaag ggattttggc aggtgaatcc gtagaattaa ctgattttca 840 52 attgtttcta gcggctaata ttttcggatt caaaaagaaa ataaatggag caaggcgatt 900 54 tagaaaggtt tttattcagt tagcgcgtaa aaatgctaaa tctcagtttc ttgctattgt 960 56 agcagctttt tgtacatttc ttggagacga aaaacaacgg gcttatattg ctggatggac 1020 58 aagagaccaa tcatctgaag tttatgaagc tgtaaaaaca gggattagtt ctagtgaatt 1080 60 gttagaaggt aaatggaaag aggcttatag taccattgaa atatttaaga atggttcagt 1140 62 tgtcgttcca ctttcaaaag aagctagaaa aactggtgat ggtaaaaacc cgtctcttgg 1200 64 aattgtcgat gaatatcatg cacatgaaac tgatgaaatt tatgacgttt tatcgtctgg 1260 66 tatggtggca aggaaagagc cgttaatgtt tatcataaca acagctggtt tcgacttatc 1320 68 aagaccttgt tatagagagt atgagtatgt cagtgacatc ttagacccgt caaaaaatgt 1380 70 agaaaacgat gattatttcg ttatgatctg tgaattggaa aagaacgatg atatcaaaga 1440 72 tgagtcgaat tggataaaag caaacccaat cgtagctaca tatgaagaag gtttggaagg 1500 74 tatacgttca gatttgaagg ttgctcttga tagacctgaa aagatgaggg cttttttaac 1560 76 caaaaacatg aatatttggg tcgataaaaa ggacaacgga tacatggata tgtcaaaatg 1620 78 gcaaaaatgc gaagtagata cctttgattt ttcaggtgcg actctttgga taggtggcga

80 cttatcaatg acaacagatt taactagtgt cggttgggtt ggaatggacg atgaaggtga

1680

Input Set : A:\PTO.RJ.txt

82 t	tttattgtt	ggacaacatt	catttatgcc	tgaagcacgt	ttgaaagaaa	agatggccat	1740
84 a	gataaggtg	cgttatgatt	tatgggccga	acaagggtat	ttaactttaa	cgcctggtga	1800
86 a	atggttgat	tatacaattg	ttgagtcttg	gatagaaaac	ttttcaaaag	acaaagaaat	1860
88 t	caagagttt	gattacgata	aatggaatgc	gttacatcta	gcacaaaatt	tagagaataa	1920
					ttatccattc		1980
92 t	tttcgagaa	aaagtatacg	aaaagaaagt	taaacataat	ggagatccag	tccttttttg	2040
		_			aacattatga	_	2100
_	<del>-</del> -			_	aatgcatttt	_	2160
	<del>-</del>				aataaagact		2220
_				_	gattctgtta		2280
					aataaagacg	<del>-</del>	2340
					aaaggaaaaa	<del>-</del>	2400
					tccgtatcaa	<del>-</del>	2460
			_	_	acaaagcatt	_	2520
	_				aactttttcg		2580
			_		gagtttgata	•	2640
	_	_	_	_	gtatacattg		2700
	<del>-</del>				acgggtggac		2760
					actcttgatg		2820
			_		tcagcttcag		2880
	=		<del>-</del>	<del>-</del>	ttagttcaat	<del>-</del>	2940
			<del>-</del>		gaatcaatgt		3000
	_			<del>-</del>	caatttcaac		3060
				<del>-</del>	actattaggc		3120
	_						3180
					aaagcgactt		3240
			=		gcgactttaa		3300
					gataaggggt		3360
		<del>-</del>		<del>-</del>	agatatgaag		3420
					agtaaagaag		
					ttgccgattg	<del>-</del>	3480
					agcaaagaag		3540
					taatgaggac		3600
					cgaaatgcgt		3660
					tgaaagttta	_	3720
		- <del>-</del>	_	_	aggaaatact	_	3780
	_	_			attagatatt		3840
					tgttgatgga	<del>-</del>	3900
		<del>-</del>			tgaaaatgga	<del>-</del>	3960
	_ <del>_</del> _	<del>-</del>	_		ggttgcattc	<del>-</del>	4020
					agctggagaa		4080
162	ctgatgagtt	taggaaaaga	aaactacaaa	tcgaactaga	gcttatataa	ggctcttttt	4140
164	ttattgataa	atttaaggag	tgatttgaat	gtcaaaagaa	ttacgtgaat	tattagctaa	4200
166	gttagaaggg	aaaaaggaag	aagtacgctc	tcttatggga	gaagataaag	tggcagaagc	4260
168	agaacaaatg	atggaagaag	tgcgatcact	tcagaaaaaa	attgatttac	aacgctcatt	4320
170	agatgaagca	gaaacggaag	aacgaaataa	tggaagagaa	gttgaaacac	gtaatgtaga	4380
172	tggtgaaatg	gaataccgcg	atgtgtttat	gaaagcatta	cgcaataaac	cattaaatgc	4440
174	tgaagaacgt	gaatttcttg	aggatgattt	agaacaacgt	gccatgtcag	gattaactgg	4500
176	ggaagatgga	ggacttgtca	tccctcaaga	tattcaaacg	caaatcaatg	aattagctcg	4560
178	ttcatttgat	gcgcttgagc	aatatgtaac	tgttgaacca	gtgcgtacac	gttcaggatc	4620

Input Set : A:\PTO.RJ.txt

180	acgagtatta	gagaaaaatt	cagatatgat	tccgtttgct	gaaatcactg	aaatgggtga	4680
182	aattccagaa	actgataatc	cgaaattttc	aaatgtacaa	tatgcagtga	aggacagagc	4740
184	aggtatttta	ccgttatctc	gttcattact	tcaagatagt	gatcaaaaca	tcctaaagta	4800
186	tgtgactaaa	tggctaggta	agaaatctaa	agttacacgt	aatgtgttaa	tcttgggcgt	4860
188	aattgaaaag	ttaacaaaac	aagcaatcaa	atctctggat	gatattaaag	atgtattaaa	4920
190	tgttaaatta	gacccagcga	tttctccgaa	tgcgatttta	cttacaaacc	aagatggatt	4980
192	taattattta	gacaaattaa	aagataaaga	cggaaaatat	attttacagt	cagatccaac	5040
194	gcaaaaaaac	aaaaaactat	ttgctggtac	taatccagtc	gttgttgttt	cgaatcgttt	5100
196	cttaaaatca	aagggaacta	cagctaaaaa	agcgccactt	attattggtg	atttaaaaga	5160
198	agctattgtt	ttatttaaac	gtgaagatat	ggaactggct	tctacagatg	taggtggtaa	5220
200	agcattcact	cgtaatacat	tagatttacg	cgcaattcaa	cgtgatgatg	tgcaaatgtg	5280
202	ggataatgaa	gcagcagttt	acggagaaat	cgatttaagc	gctcctgttg	aacaacctca	5340
204	agggtaaact	aaggaggcat	ttgaatgctt	gttaccttag	aagaagctaa	agaatggatt	5400
206	cgagtggacg	gagacgatga	cccaactatc	actatgttaa	ttaaagcggc	tgaattatat	5460
208	atttacaaag	caactggcaa	aacatttact	caaacaaatg	aagatgctaa	gttgctttgt	5520
210	ttatttctgg	tggctgattg	gtacggaaat	cgactacttg	taggtgaaaa	agccagtgaa	5580
212	aaaatcagaa	ccattgttca	gagtatgata	ttacagctcc	aatatgcttc	agagcctcag	5640
214	gaggaaagaa	aatgaatcct	gcaaaattag	ataaacggct	tacatttcaa	gtaaaagatg	5700
216	aaaatgcaaa	agggcctgac	ggtgatccga	tagatggata	taaagatgct	tttaccgtat	5760
218	ggggctcttt	tgtttattta	aagggaagga	aatactttga	ggcagcagct	gctaatagtg	5820
220	aggttcaagg	agaaacagaa	atcagaaatc	gggatgatgt	aagtgcagat	atgaaaatta	5880
222	agtacaaaaa	cgtgatttat	gatattgttt	ccgttattcc	aactcaagat	catactttat	5940
224	taatcatgtg	gaaacgtggt	gaaatgaatg	gctgatggta	tagatttaga	tttattagga	6000
226	tttgatcgtt	tagttactga	attagaccaa	atggggttac	ggggagagaa	aattgaagat	6060
228	aaagctcttg	cagctggtgg	tgaacctatt	cgtaaagcca	ttgcagaacg	agcgccaaga	6120
230	agcccaagcc	ccaaaaaacg	atctaaaagt	gaaccgtggc	gtacagggca	acatggtgca	6180
232	gaccagataa	aagtaacaaa	agctaaactt	gaaggtggaa	taaaaacagt	aaaaataggt	6240
234	cttaataaag	cggatcgttc	cccgtggttc	tatttaaagt	tccatgaatg	gggtacatcc	6300
236	aaaatgccag	cacatccatt	tatagagccg	ggttttaatg	cttcaaaagc	ggaagctgta	6360
238	cgtgctatga	cagatatttt	aaagaacgaa	atgaggttgg	atttgtgata	aatttaagac	6420
240	ctgatatttt	acaagctctt	gagaatgatc	aagagcttgt	ttcattgttg	ggtgggaaac	6480
242	gaatttatta	ccgtaaagca	aagaaggcag	aagagtttcc	gcgaattacg	tattttgaat	6540
244	tagacaatag	gccagatgga	tttgcagata	atcaagagat	tgaaagtgaa	atcttgtttc	6600
246	aagttgatgt	ttgggcaaag	agtagtacaa	cagcaatcca	tcaaaaagtg	aatgaaatca	6660
248	tgaaaagaat	tggtttctca	cgctatgcgg	ttgctgattt	atatgaagag	gatacacaaa	6720
250	tatttcatta	tgcgatgaga	ttcgcaaaag	gagtggaatt	ataaatggct	ggagaagttg	6780
252	taagaattag	ttcaacggtt	ggtgtagaca	accttgtata	tgcgaaagtt	ttacaagatg	6840
254	attcgtctgc	tattaaatat	acagatgtaa	agaaaatgga	aggtgctgta	aaggttaaat	6900
256	taactaaaaa	agtagcttct	gaggttatgt	ggagcgataa	cagaaaatca	gagattgcag	6960
258	aatctgatgg	cgaaactgaa	gtggagattg	aggttcgagg	actttcactt	tctacaaagg	7020
260	ctgacattga	agggtttcca	gaagtaaaag	atggcgtttt	agatgagaaa	cgtgaaggtg	7080
262	agaaaccata	tttagctatt	ggtttccgat	tcttaaaagc	taatgataag	tatcgatatg	7140
264	tttggttatt	aaaagggaaa	ctttcacaag	aggaagaaga	agctgaaacg	aaaaaagaca	7200
266	aaccgaactt	ccaaacaaca	aaattgaaag	gttcctttat	tgaacgtgat	tttgatgata	7260
268	gaacgaaatt	tacagcagat	gaagatgaac	caacgttcac	aaaattagtt	ggagataatt	7320
270	ggtttaataa	agtatatgaa	aaaccagtga	cacaaccacc	agcaggaaag	taagagggag	7380
272	caaaagctct	ctctttttta	ttaaatttag	gagggaaaaa	ctatgaaatt	aacattaatg	7440
274	attaataaag	aaaaacaaac	ttttaatatg	ccagaattta	ttccagcccg	ccttattcgt	7500
276	caggctcctg	aacttgctga	aattccaaac	aatcctggtc	cagaagatat	ggataaaatg	7560

Input Set : A:\PTO.RJ.txt

278	gttcaattcg	tagtgaaagt	ttatgatggt	caatttacat	tagatcagta	ttgggatggt	7620
280	gttgatgccc	gtaaattctt	atcgacaact	tcagatgtaa	ttaacgcaat	tataaatgaa	7680
282	acagtggaag	cagcaggggg	tagtactgaa	tcaggagaag	aagaaaaccc	aaacgcatag	7740
284	agggaggagg	gctaacgttc	agtgagttta	tggacgagct	ctacctctct	ttattgcgac	7800
286	aagggtacaa	acaccatcac	attgataatg	agatggatat	ttggcattat	ttgagactta	7860
288	atcgaaaaat	gcatgaaaac	ggaaatgaaa	attacgaagg	ctccaattca	aatgaaatag	7920
290	aagtgccagc	ggaaaacatt	atttaacgag	ggaggtgaga	ctatggcgaa	tgaaataaat	7980
	<del>-</del>		·		gacaaggtat		8040
294	ggtcgtgcag	tcaggacgtt	acagaatgaa	ttgaaatctg	taagtacagg	aatgggcggt	8100
296	tttgctaacg	ctagtcagca	aacacaagcg	aaaatgaata	cactcagtag	gctcattgat	8160
	=			<del>-</del>	atcaaaataa	=	8220
				<del>-</del>	ttaataaggc		8280
				-	aagctgaaca		8340
	<del>-</del>	_	=	_	ttcagtctat		8400
	<del>-</del>				aagtagatgt	<del>-</del> -	8460
				=	aagcctataa		8520
		<del>-</del>		_	ctgaacaaat		8580
			<del>-</del>		caaatcgtga		8640
	<del></del>				cattaggtaa	= -	8700
	<del>-</del> -	<del>-</del>	<del>-</del> -		cttacgcaat	_	8760
					agatggccaa		8820
			<del>-</del>		aattggctgt		8880
					tcgaggaatt		8940
			<del>-</del>		gtgcccttaa		9000
					ccacagctct		9060
				_	tatctggtgc		9120
					cttcatcagc		9180
	<del>-</del>		-		cggtatttgc		9240
		-	· <del>-</del>	<del>-</del>	taatgaggtt		9300
				<del>-</del>	ttacttataa		9360
			<del>-</del>	<del></del>	ccagaaatgt		9420
					taacgaaatg		9480
					ttttatcatc		9540
					gtacacttca		9600
		= :			cattatttgg		9660
					gtgtcaatga		9720
					aaattgatac		9780
					agacaattgg		9840
	<del>-</del>	<del>-</del>	<del>-</del> -	<del>-</del>	ttgttgatgg	<del>-</del>	9900
	<del>_</del>	<del>-</del> -			gtatcgtcct		9960
					gaatgattgc		10020
							10020
					ctggaattgc	_	10140
					caattggtct	_/	10200
				_	aaaaagcgac		10260
				_	aagtaagctc		10260
					gacaaaagtt	_	10320
					agttgattgg		10380
					agcaaaaaga		
J/4	cicadadagt	tettigetga	cccgcatgta	claaccgctg	aagaagagaa	Caaacyaatc	10500

Input Set : A:\PTO.RJ.txt

		·					
376	gaacagttaa	atcagcacta	tgaacaagaa	aagctaaaaa	cgcaagaaaa	agaaaataaa	10560
378	attaaagaga	tcttacaaac	agcggctaga	gaaaacagag	aattaacgac	atccgaacgt	10620
380	atctctttac	aagcattgca	ggatgaaatg	gacagagttg	ctgttgagca	tatgtctaaa	10680
382	aatcaaatgg	agcagaaggt	tattcttgaa	aatatgcgtg	tgcaggctag	tgaaatttca	10740
384	gctagacagg	cagcggaagt	tgtagagaat	agcgccaaag	caagagataa	agttattgaa	10800
386	gatgcgaaaa	agacccgtga	tgaaaaaatt	gcagaggcga	ttcgccaacg	tgatgaaaat	10860
388	aaaacaatca	ctgctgatga	agcgaacgca	atcattgcag	aggcaaaacg	tcaatatgat	10920
390	agtacagttt	ctacagctcg	agataaacat	aaagaaattg	tgagtgaagc	aaaagcgcaa	10980
392	gctggtgaac	atgcaaatca	ggtagattgg	gaaactggcc	aagtaaaatc	gaaatatcaa	11040
394	gctatgaaag	acgatgttat	tcgaaaaatg	aaagaaatgt	ggtcggacgt	taccaacaaa	11100
396	tatgaagata	tgaaaaactc	tgcaagcaac	aaagtagagg	agataaaaaa	tacagtttca	11160
398	agaaaatttg	aagagcagaa	aaaagctgtt	actgataaga	tgtcagaaat	aaaaagtagt	11220
400	attgaagata	agtggaatac	agttgaaaag	tttttcagtt	ctataaattt	acgttccatc	11280
402	ggtaaatcaa	tcatagaagg	gcttggcaag	ggaatagatg	acgcttcagg	aggtctgttt	11340
404	agtaaggctg	cggaaattgc	aagtgatatt	aagaagacta	tttctggagc	attagaaatt	11400
406	aacagtccgt	ctaaagtgat	gattccagtc	ggtagcgcag	ttccagaagg	tgttggggtt	11460
408	ggtatggata	agggaaaacg	atttgttgtg	gatgcagcaa	aaaatgtagt	cggaactgtt	11520
410	aagaaacaaa	tggggaatat	gccatctgtt	tttgattttg	gattccaaac	aaatcaatat	11580
412	agtatcccgc	aaaatacatt	tagcgatttc	agtggatata	tgcaaccgca	attatcttat	11640
414	aacaatccat	ctatggcaaa	aacaatattc	ccaaatagac	caggtggaga	acaagaactg	11700
416	aatttaaccg	taaacatgac	taatgtttta	gatggaaaag	agcttgcaaa	cggaagttac	11760
418	acctatacta	caaaacttca	aaatcgtgaa	caaaaaagaa	gagcggaatt	ttaagggtgg	11820
420	tgagcacgtt	ggggaaactt	agttttactt	ttaataatat	tagaaaagat	tatattcaaa	11880
422	tgctagttgg	aagaaaacgt	ccttcatggg	ctccagtaaa	aagaagatta	gtaagagtcc	11940
424	ctcatcgcgc	aggggctctt	ttacttaata	cagaaacgga	ggaacgtcgt	attgacgttc	12000
426	ctcttgttat	taaagcgaaa	aaagatatgg	cagatttaca	aaagttaaaa	gaagatttag	12060
428	cggattggtt	atatacagag	caacccgctg	aacttatttt	tgatgatgag	ttagacagga	12120
430	cttatttagc	attaattgat	ggttctgtcg	atttggatga	aatagtcaat	agaggtagag	12180
432	gtgttattac	ttttgtttgt	ccaatgccgt	ataaattagg	gaaaacaaat	actcacaaat	12240
434	ttacgcaaga	gtggtctaca	gaaacaactt	cttattttac	taataaagga	agtgtagaag	12300
436	ctccagcgtt	aattgaaatg	acggtgaaaa	aaccaagtac	ctttttagat	gtatggtttg	12360
438	gagagtatcc	gaataatcgt	gattatttca	gaataggcta	ccctctgact	gtggaagaaa	12420
440	ccacggtaca	agaacgagaa	agagttatgt	gggatgaaat	ggccactcct	ataggatgga	12480
442	cacccgttac	tggacaattc	gatgatatga	aaggaacagg	gagttttaaa	tcgcgtggtg	12540
444	gttatgcgct	gtattgtgaa	gattacggaa	aagatgtagg	attctacggt	gctatagcca	12600
446	agaaaaacat	tccgggcggc	ccattacaag	actttgaaat	ggaggcatgg	atgactttaa	12660
448	agtctaaaaa	tataggtgaa	atgggtcgtg	ttgaagttct	tcttctagat	gaggctagta	12720
450	atgtggtagc	ccgcatcaat	atgaatgatc	tatatgcaac	tgccgaaatt	acaagggcac	12780
<b>452</b>	atatgaaaat	tggaaatagc	ggaacaccca	atagttttcg	aaaattagtt	gatacaagtg	12840
454	ggtattattc	gaatacattt	aaccaatttc	gagggcgttt	gcgtatcgct	aggcggggga	12900
456	aggtgtggtc	tgtatatgtg	gctaagttta	tagatggtac	agaaaaagat	ggcgcttcgc	12960
458	ttgtagaacg	ttggattgat	gaaacaggaa	atccaatgac	agaacgtaaa	attgcacaag	13020
460	ttatgattgc	gatttgcaag	tgggataatc	accagcctgt	taatgaaata	caaattgatg	13080
462	atttgaaatt	ttggaaggta	aacaaagttc	catctaatgc	acaaccatat	atctttgata	13140
464	ctggagataa	aattgttatc	gatactgaga	aaagtcttgt	cacaatcaac	gggaagaatg	13200
466	caatcaatat	aaaagaaatc	tttagtaatt	ttcctgtcat	aatacgtggt	gacaatcgta	13260
468	tcgatattat	gccgccagat	gtaaacgcaa	caatcagtta	tagggagaga	tatagatgag	13320
470	aacaccaagc	gggattttgc	atgttgtgga	ttttaaaaca	gatcaaatcg	tcgcagctat	13380
472	ccaaccagag	gactattggg	atgacaaacg	gcattgggaa	cttaaaaata	atgttgacat	13440

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/593,545

DATE: 09/29/2006

TIME: 11:13:24

Input Set : A:\PTO.RJ.txt

Output Set: N:\CRF4\09292006\J593545.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date